

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/001208

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ C01B3/32, B01J19/00, H01M8/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ C01B3/00-3/58, B01J10/00-12/02, 14/00-19/32, H01M8/04-8/06Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1926-1996 Toroku Jitsuyo Shinan Koho 1994-2004
Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2002-252014 A (Casio Computer Co., Ltd.), 06 September, 2002 (06.09.02), Par. Nos. [0282] to [0285], [0292]; Figs. 40, 41 & US 2002/81468 A1 & WO 02/50934 A2	1-58
Y	JP 10-503884 A (Battelle Memorial Institute), 07 April, 1998 (07.04.98), Page 10, lines 10 to 21; page 11, line 19 to page 12, line 11; page 14, lines 13 to 28; Figs. 3, 4 & US 5611214 A	1-58
Y	JP 2001-302203 A (Nippon Telegraph And Telephone Corp.), 31 October, 2001 (31.10.01), Claims; Par. Nos. [0023] to [0040]; Figs. 1, 2 (Family: none)	4, 5, 7, 12, 13, 16, 20-22, 26-28, 30-41, 45, 53, 55, 57, 58

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search
28 April, 2004 (28.04.04)Date of mailing of the international search report
18 May, 2004 (18.05.04)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

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PCT/JP2004/001208

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2001-146401 A (Mitsubishi Electric Corp.), 29 May, 2001 (29.05.01), (Family: none)	1-58
A	JP 6-111838 A (Toshiba Corp.), 22 April, 1994 (22.04.94), (Family: none)	1-58
P, A	JP 2003-45459 A (Casio Computer Co., Ltd.), 14 February, 2003 (14.02.03), (Family: none)	1-58
P, A	JP 2003-340273 A (Casio Computer Co., Ltd.), 02 December, 2003 (02.12.03), (Family: none)	1-58
P, A	JP 2003-151577 A (Sanyo Electric Co., Ltd.), 23 May, 2003 (23.05.03), (Family: none)	1-58